WHAT IS CLAIMED IS

1. A device for delivering at least one fuel additive to a fuel, said device comprising an ion-exchange resin to which is removably attached a fuel additive.
2. The device of claim 1, wherein the fuel is selected from the group consisting of gasoline, middle distillate fuel, diesel, bio diesel, kerosene, and mixture thereof or precursors thereof.
3. The device of claim 1, wherein the ion-exchange resin is selected from the group consisting of anionic exchange resins, and cationic exchange resins.
4. The device of claim 1, wherein wherein the ion-exchange resin is selected from the group consisting of anionic exchange resins.
5. The device of claim 1, wherein wherein the ion-exchange resin is selected from the group consisting of cationic exchange resins.
6. The device of claim 1, wherein the fuel additive is at least partially removed from the ion-exchange resin by means of a chemical reaction with a component in the fuel.
7. The device of claim 1, wherein the fuel additive is at least partially removed from the ion-exchange resin by means of a chemical reaction with a contaminant in the fuel.
8. The device of claim 6, wherein the component in the fuel is selected from the group consisting of undesired byproducts.
9. The device of claim 7, wherein the contaminant in the fuel is selected from the group consisting of impurities.
10. The device of claim 1, wherein the fuel additive is at least partially removed from the ion-exchange resin by means of a physical reaction.
11. The device of claim 1, wherein the fuel additive is selected from the group consisting of lubricity additives, combustion improvers, detergents, dispersants, cold flow improvers,

dehazers, demulsifiers, cetane improvers, antioxidants, scavengers, and pollution suppressants.

12. The device of claim 1, wherein the fuel additive comprises a manganese-containing compound.

13. The device of claim 1, wherein the device further comprises a permeable membrane through which fuel can permeate into the device and the fuel additive can permeate out of the device.

14. A machine having an engine, said machine comprising the device of claim 1.

15. A vehicle containing the device of claim 1.

16. The vehicle of claim 15, wherein the vehicle is selected from the group consisting of cars, trucks, buses, aircraft, trains, recreation vehicles, water craft, and fuel-powered engines.

17. A device for supplying an additive to a fuel and adapted to release the fuel additive into said fuel at a controlled rate, said device comprising:

a fuel-permeable housing assembly defining a chamber; and

an ion-exchange resin to which is removably bound a fuel additive disposed within said chamber.

18. A method for supplying a fuel additive to a fuel comprising: providing to a fuel supply an ion-exchange resin to which is removably bound a fuel additive; displacing the fuel additive from the ion-exchange resin by means of replacing the additive on the ion-exchange resin with a material in the fuel, whereby the fuel additive is released in to the fuel.

19. A system for supplying an additive to a fuel and adapted to release the fuel additive into said fuel at a controlled rate, said system comprising:

an ion-exchange resin to which is removably bound a fuel additive;

a fuel supply vessel containing said resin; and

fuel.